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According to M.P.E.P. § 2142, three criteria must be met for the Examiner to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in Gray, Kaaden, Miyauchi or in knowledge generally available to one of ordinary skill in the art, to modify Gray with Kaaden and Miyauchi. Second, there must be a reasonable expectation that this modification will succeed. Finally, either Gray, Kaaden, Miyauchi must teach or suggest all claim limitations.

The Examiner opens with the following statement:

The aforementioned claims [50-82] set forth the following features, inter alia, disclosed in Gray et al '772: a magnetic recording head having a plurality of thin film elements, each element having a yoke with front and back regions alternately positioned on each side of a position line, each yoke formed on a substrate; a position line normal to the media direction; each gap of the thin film elements having a gap angle with the position line and opposite the gap angle of the adjacent gap angle; a conductive coil having a plurality of loops, each loop having a portion passing within the yoke and encircling the lower yoke section; see Figures 2, 5 and 7 of Gray et al '772.

As the sole support for his bald assertion, the Examiner merely points to three figures. Figure 2 shows prior art which Gray disparages in his Background section. Figures 5 and 7 show two embodiments with the same basic yoke design. The Examiner has not cited even a single reference or passage to support any assertion that Gray discloses any element of Applicants' invention. For this reason alone, the Examiner has failed to establish a *prima facie* case of obviousness.

Gray's Figure 2 shows a pair of write elements each with a flat planar coil.

With regards to Figure 2, Gray states the following in column 2, lines 18-25:

Unfortunately, thin film heads which employ planar spiral coil structures, such as coils 60 and 65 shown in FIG. 2, consume a relatively large amount of substrate area. This is especially true when multiple heads and multiple coil structures are situated on a common die 70 as illustrated. It is difficult to sufficiently miniaturize this planar spiral type of head assembly to fit within reduced size windows and slot in the head assembly.

Both Gray and Applicants recognize this problem. However, the solution proposed by each is substantially different. Gray's solution is described in the Abstract, a portion of which is reproduced as follows (emphasis added):

A substantially helical thin film coil structure (220) is situated atop the substrate. A magnetic core (256) extends through an axial region of the coil structure. An elevated, thin film magnetic gap structure is **position [sic] atop the coil structure.**

As can be seen in Gray's Figure 5, upper head structure 365 is formed directly over coils 212,220. This produces a substantially symmetric head 110. Thus, there is not "a front region defining a gap and a back region admitting loops of a conductive coil" as provided by Applicants. Further, Gray neither teaches or suggests "yokes alternately positioned such that a first plurality of write elements has each back region on a first side of the position line and a second plurality of write elements has each back region on a second side of the position line opposite the first side" as provided by Applicants. Gray's yoke is symmetric, making such positioning irrelevant if not impossible.

The Examiner, apparently recognizing this defect in Gray, attempts to combine Gray with Kaaden as follows:

Regarding claims 50, 62 and 71, Gray et al '772 do not teach a first plurality of write elements having their back regions on a first side of a position line and a second plurality of write elements on a second side of the position line opposite the first side.

\* \* \* \*

Kaaden et al '188 disclose a magnetic head assembly (5) having a first plurality of write elements (7) having their back regions on a first side of a position line, e.g., matrix (80, and a second plurality of write elements (7) on a second side of the position line opposite the first side. See Figures 1-2 of Kaaden et al '188 which shows the position (matrix) lines having write elements on either side of the line which splits the head write elements.

Kaaden's description of this arrangement appears in column 4, lines 15-21, as follows:

A planar surface 6 of the magnetic head 5 comprises a plurality of active parts 7. Each active part 7 is used to address one microtrack 2. The active parts 7 are arranged in a two-dimensional matrix 8 which is represented by dotted lines for reasons of comprehension. To a microtrack 2 corresponds respectively one dedicated active matrix part 7 in matrix 8.

There are two problems with the Examiner's assertion. First, Figures 1 and 2 show *symmetric* elements 7. These elements do not have a front portion and a back portion as provided by Applicants. Second, Kaaden's elements are described as arranged in a matrix. This suggests

a rectangular grid of elements *all oriented in the same manner*. There is no teaching or suggestion in either Kaaden or Gray of a position line about which elements are alternately arranged in any manner.

The Examiner also suggests Gray's Figure 7 somehow discloses Applicants' invention. Figure 7 is described as "an alternative thin film head assembly employing a pancake spiral coil structure." (Col. 5, ll. 40-41.) However, even in this embodiment, Gray discloses a symmetrical yoke in which the gap sits above the coils. In particular, the yoke is composed of bottom magnetic layer 150', first magnetic side pole 265', second magnetic side pole 270' and upper head assembly 365. (See, col. 18, ln. 38-col. 19, ln. 29.) Thus, Figure 7 neither teaches nor suggests Applicants' invention.

Miyauchi, cited by the Examiner as disclosing a magnetic head having a read element, also discloses a symmetric yoke arrangement.

Claims 50, 60 and 71 are patentable over any combination of Gray, Kaaden and Miyauchi. The remainder of claims 50-82 depend from one of claims 50, 60 or 71 and are, thus, also patentable.

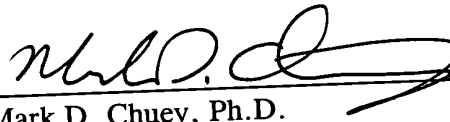
### Conclusion

Claims 50-82 are pending in this Application. As argued above, Applicants believe that the Examiner has failed to establish a *prima facie* case of obviousness. The case is in appropriate condition for allowance. Accordingly, such action is respectfully requested. No fees are believed to be due. However, any fees due may be charged to Deposit Account 19-4545 as specified in the Application Transmittal.

The Examiner is invited to telephone the undersigned to discuss any aspect of  
this case.

Respectfully submitted,

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